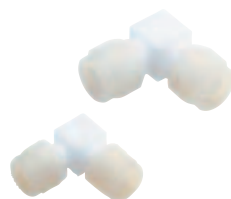


7500 ICP-MS Supplies / Connectors/Peristaltic Pump Tubing and Supplies



Connectors for Plasma and Auxiliary Gases
P/N G1820-65027



Gas Line Connector
P/N G1820-65052



Carrier Gas Connector
P/N G1820-65214



Blend Gas Line Connector
P/N G1820-65119

Connectors

Description	Specs	Usage	Part No.
Connectors, Teflon (2/pk)	6 mm and 4 mm	For plasma and auxiliary gases	G1820-65027
Carrier gas connector for Babington Nebulizer	L-shaped Teflon connector with a ferrule and O-ring	For connection with 4 mm diameter tubing	G1820-65214
Blend gas line connector, polypropylene		Connects 4 mm tubing with Babington and Cross Flow Nebulizers	G1820-65119
Carrier gas line connector, polypropylene	Includes ferrules and Viton O-ring	Connects 4 mm carrier gas tubing to Concentric Nebulizer	G1820-65052

Peristaltic Pump Tubing and Supplies

Description	Specs	Usage/Replacement	Unit	Part No.
Tygon tubing	1.02 mm ID, length = 400 mm	Standard tubing for sample introduction	12/pk	G1833-65569
Ismaprene tubing	1.52 mm ID, length = 400 mm	Standard tubing for drainage; replacement required when tubing becomes stretched	12/pk	G1820-65216
ISTD tubing, Tygon	0.19 mm ID, length = 400 mm	Used for on-line internal standard addition. Replacement is required when tubing is stretched	12/pk	G1833-65571
On-line ISTD addition Kit		Permits mixing of sample solution with internal standard solution at a fixed rate using peristaltic pump		G1820-65479
Drain tubing kit		Used to drain spray chamber to waste		G1820-65221
Drain tank				G1820-65016
Drain tank for organic solvent				G1820-65505
Tubing for drainage	4 mm ID, 2.5 m			G1820-65515

ICP-MS



Two tips from Agilent...

TIPS AND TOOLS

1. Use Agilent's drain tubing kit to replace a heavily contaminated drain tubing assembly or when pumping efficiency is low.
2. To extend the lifetime of your tubing, Agilent recommends releasing the peristaltic pump tubing when the system is not in use.

7500 ICP-MS Supplies / Gas Line Supplies

Agilent 7500 ICP-MS Supplies

The 7500 Series is the ultimate in trace element measurement, combining high performance with unparalleled sample introduction flexibility to give a practical and reliable problem-solving tool.

Building on the award-winning and best-selling 4500, the Agilent design team has taken the best of the previous model and added new innovative features. From its durable stainless steel chassis, through the novel digital synthesized RF scanning quadrupole to the high speed, wide dynamic range detection system, the 7500 Series is an exceptionally powerful high-performance instrument with the robustness and reliability required of a routine workhorse.

Note: Most 7500 parts listed in this section are common to the 7500 a/i/s/c/ce platforms. Parts unique to the 7500c/ce are listed in separate tables.



7500 ICP-MS

Gas Line Supplies

Description	Specs	Usage	Unit	Part No.
Inner sleeve for carrier/ auxiliary/blend gas			5/pk	5042-0922
Inner sleeve for plasma gas line			5/pk	5042-0923
Argon tubing assembly, 5 m Teflon tubing, one in-line filter and connector set				G1820-65023
Plasma and auxiliary gas line tubing, Tygon	3.17 mm ID, 6.35 mm od, 35 cm (for plasma gas line). 2.38 mm ID, 3.96 mm od, 35 cm (for auxiliary gas line), 1 ea.	Connects the plasma gas and auxiliary gas lines to the torch.		G1833-65428
Connector for end cap and gas line				5063-5263
Tubing for carrier/ makeup gas line, PTFE	3 mm ID, 4 mm od, 350 mm		2/pk	G1833-65414

7500 ICP-MS Supplies / Integrated AutoSampler Supplies/ISIS Supplies

Integrated AutoSampler Supplies

Description	Usage	Unit	Part No.
Type A Tray 89 Position	For 6 mL vial		G3160-65300
Type B Tray 53 Position	For 18 mL vial		G3160-65301
Type C Tray 18 Position	For 50 mL vial		G3160-65302
6 mL vials	For Type A Tray 89 Position	200/pk	G3160-65303
18 mL vials	For Type B Tray 53 Position	55/pk	G3160-65304
50 mL vials	For Type C Tray 18 Position	20/pk	G3160-65305
PFA needle			G3160-65306
Rinsing Bottle, 100 mL		6/pk	G3160-65307
Type D Tray			G3160-65308
Type E Tray	For 6 mL and 18 mL vials		G3160-65309
Polyethylene vial, 2 mL	For Type D Tray	200/pk	G3160-65315
PFA vial, 1.5 mL	For Type D Tray	10/pk	G3160-65317

G3138A/G3148A Integrated Sample Introduction System (ISIS) Supplies

Description	Specs	Usage	Unit	Part No.
Peristaltic pump tubing, Tygon	0.89 mm ID, 3 stops	For Agilent 7500 Pump	12/pk	5064-8014
Peristaltic pump tubing, Tygon	0.25 mm ID, 2 stops	For ISIS Pump	12/pk	5064-8015
Sample tubing, ETFE	0.8 mm ID, 1.6 mm od			5064-8016
Tee joint				5064-8017
Cross joint				5064-8018
Union joint				5064-8019
Sample tubing, PTFE	2 mm ID, 3 mm od			5064-8020
Teflon nut		For 3 mm od tubing		5064-8021
Front and back ferrule		For 3 mm od tubing		5064-8022
Teflon nut		For 1.6 mm od tubing		5064-8023
Front and back ferrule		For 1.6 mm od tubing		5064-8024



ICP-MS

7500 ICP-MS Supplies / ISIS Supplies

G3138A/G3148A Integrated Sample Introduction System (ISIS) Supplies (continued)

Description	Specs	Usage	Unit	Part No.
Peristaltic pump tubing adapter				5064-8026
Tubing clamps			Small, 10/pk Large, 5/pk	5064-8027
Peristaltic pump tubing, Tygon	1.02 mm ID, 2 stops	For ISIS Pump	12/pk	5064-8028
Spiral tubing				5064-8029
Wrench		For valve maintenance		5064-8032
Tag		For tubing identification	10/pk	5064-8033
Peristaltic pump tubing, Tygon	0.25 mm ID, 3 stops	For Agilent 7500 Pump	12/pk	5064-8034
Standard accessory parts		For high sample throughput		G3138-65000
Standard accessory parts		For auto dilution		G3138-65001
Standard accessory parts		For discrete sampling		G3138-65002
Joint holder		For Agilent 7500 pump		G3138-65102
Joint holder		For ISIS pump		G3138-65103
Sample line connector (Cross joint and earth block)				G3138-65104
Rotor seal		For valve		G3138-65117
Nut		For valve		G3138-65118
Ferrule		For valve		G3138-65119
Mixer				G3138-65121
Sample loop 100 µL				G3138-65122
Tubing adapter				G3138-65126
Sample tubing, PFA	0.3 mm ID, 1.6 mm od			5064-8013
Plastic tray				G3138-65125

ICP-MS

7500 ICP-MS Supplies / Nebulizers and Nebulizer Supplies

Nebulizers and Nebulizer Supplies

The nebulizer disperses the sample solution from the peristaltic pump as a fine mist into the spray chamber using a stream of argon gas. There are three types of nebulizers available for the 7500: The Babington Nebulizer, Concentric Nebulizer and Cross Flow Nebulizer.

Nebulizers and Nebulizer Supplies

Description	Specs	Usage	Unit	Part No.
Babington Nebulizer	Includes O-rings (P/N G1820-65199) and sample tubing (P/N G1820-65276)	Use to introduce samples with high matrix and high total salts. Clean when contaminated or when orifices are clogged.		G1820-60453
Sample tubing with connector	Tool included	Use with Babington Nebulizer. Replace the tubing when it is heavily contaminated by high matrix samples		G1820-65276
End cap for Babington Nebulizer	Includes O-ring and blend gas line connector	Replace when memory effects do not disappear after cleaning. Insert nebulizer in middle of end cap all the way through. Attach end cap to spray chamber with "TOP" mark facing up.		G1833-65476
Pyrex Concentric Nebulizer	Use with P/N G1820-65052 Argon gas connector, P/N G1820-60160 Connector kit, P/N G1820-65121 end cap	Use with clean samples only. Not resistant to hydrochloric acid. Clean with a 5% HNO ₃ (v/v) bath; do not use ultrasonic bath.		G1820-65030
Quartz Concentric Nebulizer	Use with P/N G1820-65337 Quartz spray chamber, P/N G1820-80237 Quartz connecting pipe	Recommended for trace analysis of clean samples. Lower contamination level than Pyrex. Clean using 5% HNO ₃ (v/v) bath; do not use ultrasonic bath.		G1820-65138
End cap for Concentric Nebulizer	Includes blend gas line connectors, O-rings for end cap, O-rings for fittings to end cap, PTFE	Connects the Concentric Nebulizer (Pyrex or Quartz) with the spray chamber. Replace when the capillary is broken or the nebulizer is damaged.		G1833-65475
Connector kit	Includes O-rings	Connects Concentric Nebulizer with sample line. Port with large hole connects to nebulizer; smaller port connects with sample tubing.		G1820-60160
Cross Flow Nebulizer	Includes bushing, carrier gas line connector, blend gas line connector, sample tubing, and gas line tubings with inner sleeves.	Standard nebulizer for the inert kit. Resistant to hydrofluoric acid. Set carrier gas pressure to 500 kPa (5 kg/cm ²). Clean with 5% HNO ₃ (v/v) bath. Replace when memory effects remain after cleaning.		G1833-65462
O-rings for end cap, Viton	O-rings	Use for the end cap of the Babington Nebulizer, Cross Flow Nebulizer and Concentric Nebulizer	5/pk	G1820-65198
Sample tubing		Sample tubing for Cross Flow Nebulizer. Replace when the tubing is bent, damaged, or when there are serious memory effects in the sample introduction area.		G1820-65141
Nebulizer sample tubing, Teflon	0.5 mm ID, 1.56 mm od, 5 m	Used for standard sample introduction. Replace when the tubing is bent, damaged, or when there are serious memory effects in the sample introduction area.		G1820-65105
Babington Nebulizer removal tool				G1820-65345
Sample tubing for on-line ISTD addition, PFA	0.3 mm ID, 1.6 mm od, 3 m			G1820-65478



ICP-MS

7500 ICP-MS Supplies / Nebulizers and Nebulizer Supplies/Spray Chambers

Nebulizers and Nebulizer Supplies (continued)

Description	Specs	Usage	Unit	Part No.
O-ring kit for Concentric Nebulizer	Viton O-rings, 2 types		10 ea.	G1820-65491
O-rings for organic solvents		For end cap	2/pk	G1820-65518
O-rings for organic solvents		For use with the Concentric Nebulizer		G1820-65520
Ferrule and Viton O-ring kit for carrier gas line connector		For use with the Babington and Concentric Nebulizer		G1820-65533
Sample Tubing for MicroMist Nebulizer	0.25 mm ID			G3266-80010
Sample Tubing for MicroMist Nebulizer	0.5 mm ID			G3266-80011
Carrier gas connector for MicroMist Nebulizer				G3266-80015



Babington Nebulizer
P/N G1820-60453



Polypropylene Spray Chamber
P/N G1833-65463

Spray Chambers

Description	Specs	Usage/Replacement	Unit	Part No.
Quartz spray chamber for Babington Nebulizer		Used for Babington, Concentric, and Micro-Concentric Nebulizers. Replace when memory effects remain after cleaning.		G1820-65337
Polypropylene spray chamber	Sapphire Tube	Same usage as Quartz and is resistant to hydrofluoric acid. Replace when memory effects remain after cleaning.		G1833-65463
Quartz ball joint connector	Requires 2 clamps (P/N G1833-65430)	Connects the Quartz spray chamber to the torch.		G1833-65426
Clamps		Used to hold connectors	2/pk	G1833-65430
Bushing at spray chamber drain, Viton			5/pk	G1820-65482
Connector for spray chamber drainage, Polypropylene				G1820-65503
Bushing at spray chamber drain		For use with organic solvents		G1820-65504
T-connector for optional gas introduction, Quartz		Between spray chamber and torch		G1833-65427
Ball joint connector between torch and spray chamber, Polypropylene				G1833-65464

7500 ICP-MS Supplies / Torch and Components

Torch and Components

Description	Specs	Usage/Replacement	Unit	Part No.
Quartz torch: Comprised of three Concentric Quartz tubes through which streams of argon gas pass. Three streams = plasma, auxiliary, and nebulizer (carrier) gas.	2.5 mm ID	Not suitable for samples containing hydrofluoric acid. Must be completely dried before installing and igniting the plasma. Replace if chipped, cracked, or distorted.		G1833-65423
	1.5 mm ID			G1833-65424
	1.0 mm ID			G1833-65425
Bonnet for ShieldTorch		Use with shield plate (P/N G1833-65406 or P/N G1833-65419) for ShieldTorch system. Replace if bonnet is cracked or damaged.		G1833-65421
Shield plate for ShieldTorch system, copper		System is used to drastically reduce argon gas-related polyatomic ion generation. Enables ultra trace analysis of elements sensitive to ion interference.	2/pk	G1833-65406
Long life shield plate for ShieldTorch	Uses special material for longer lifetime than P/N G1833-65406	Use with the bonnet		G1833-65419
Inert torch	Inner tubing not included	Quartz torch for inert sample introduction. Resistant to hydrofluoric acid. Torch must be completely dried before installing and igniting plasma.		G1833-65422
Platinum injector	2 mm ID	For inert torch		G1833-65409
Platinum injector	2.5 mm ID	For inert torch		G1833-65415
Platinum injector	1.5 mm ID	For inert torch		G1833-65416
Work coil				G1833-65432
Plasma gas and Aux gas line tubing				G3270-65021



Quartz Torch
P/N G1833-65423



Inert Torch
P/N G1833-65422



ICP-MS

7500 ICP-MS Supplies / Sampling and Skimmer Cones and Supplies

Sampling and Skimmer Cones and Supplies

Description	Specs	Usage/Replacement	Unit	Part No.
Nickel sampling cone	Copper base			G1820-65238
O-ring for sampling cone	Viton O-ring	Seals the sampling cone to the vacuum chamber.		G1820-65025
Platinum sampling cone	Copper base			G1820-65239
Platinum sampling cone, 18 mm	18 mm with copper base			G1820-65360
Nickel skimmer cone for 7500 a/i/s		The point of the skimmer cone is easily deformed. A cone deformed cone will greatly affect performance. If the O-ring becomes stuck, wipe it off with methanol.		G1820-65050
Platinum skimmer cone for 7500 a/i/s	Copper base	Must be mounted on brass skimmer base.		G1820-65237
Skimmer base (with screws) for 7500 a/i/s	Stainless steel Brass	Stainless steel holds the standard Nickel skimmer cone. Do not use with Platinum cone. Brass holds the Platinum or Nickel skimmer cone.		G1833-65407 G1833-65408
Screws for skimmer base		Used to install the skimmer base to the vacuum chamber	4/pk	G1820-65435
Interface wrench	Round type	Used to remove and install the skimmer cone		G1833-65079
Sampling cone wrench		Used to remove and install sampling cone		G1833-65405
Nickel sampling cone for T-mode				G1820-65480
Nickel skimmer cone for T-mode				G1820-65481

7500c Sampling and Skimmer Cones and Supplies

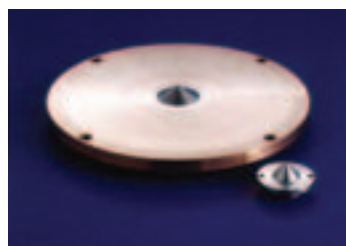
Description	Usage/Replacement	Part No.
Skimmer cone, Platinum	Platinum cone and Copper base. Replace when tip of cone is damaged	G1833-65092
Skimmer cone, Nickel (with screws)		G1833-65497
Skimmer base, SS (with screws)		G1833-65498
Skimmer base, Brass (with screws)		G1833-65505

Note: Most 7500 parts listed in this section are common to the 7500 a/i/s/c platforms. Parts unique to the 7500c are listed in separate tables.

7500 ce Skimmer Cones

Skimmer Cone (Ni)	G3270-65024
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ICP-MS



Sampling and Skimmer Cones

7500 ICP-MS Supplies / Ion Lens System Components

Ion Lens System Components

7500a/i/s Ion Lens System Components

Description	Specs	Usage/Replacement	Part No.
Extraction lens	Lens 1 Lens 2	Placed just behind the skimmer cone and mounted on the skimmer base. Extracts positive ions and accelerates them to the Einzel lens.	G1833-65417 G1833-65413
Screw/spacer set for extraction lens		Spare screws and spacers for the extraction lens	G1833-65024
Omega lens	Block of 5 lenses: omega bias, omega (+), omega (-), QP focus, and plate bias	Separates photons and ions and steers ions onto the quadrupole MS	G1833-65418
Screw/spacer set for ion lens		Spare screws and spacers for omega lens	G1833-65025
Polishing paper kit	Waterproofed sheets, #400 and #1200, 5 of each	Used to clean the ion lenses and the interface cones	G1833-65404



Extraction Lens 1
P/N G1833-65417



Extraction Lens 2
P/N G1833-65413

7500c Ion Lens System Components

Description	Unit	Part No.
Screw kit for ion lens		G1833-65088
Octopole		G1833-65094
Lens cleaning kit		G1833-65096
Extraction lens		G1833-65499
Einzel lens 1		G1833-65500
Einzel lens 2		G1833-65501
Einzel lens 3		G1833-65502
Octopole assembly		G1833-65503
Tubing for reaction gas	2/pk	G1833-65089

7500 ce Ion Lens System Components

O Ring for Reaction Cell	G1833-66035
Extraction Omega Lens Assembly for 7500 ce	G3270-65023
Extraction Lens 1 for 7500 ce	G3270-65028
Extraction Lens 2 for 7500 ce	G3270-65029
Omega Lens for 7500 ce	G3270-65030
Omega Bias Lens for 7500 ce	G3270-65031

7500 ICP-MS / Electron Multiplier/Rotary Pumps and Supplies/Miscellaneous Components



Electron Multiplier
P/N 5184-1983

Electron Multiplier

Description	Specs	Part No.
Electron multiplier	Converts incident ions into an amplified electric current to measure the ion signal. As voltage increases, amplification factor (gain) increases.	5184-1983

Vacuum System: Rotary Pumps

- The oil level on the pump should be checked every three months, when the plasma is ON.
- Maintain the oil level between the Max and Min levels on the gauge.
- Standard frequency for changing the oil is approximately every 4,500 hours.

Warning: Be careful when changing oil because the oil may have absorbed dangerous substances. The oil in the rotary pump on the interface side of a 7500 equipped with a hydrofluoric acid resisting introduction system is especially dangerous. DO NOT TOUCH THE OIL WITH BARE HANDS.

Rotary Pumps and Supplies

Description	Specs	Unit	Part No.
Oil, rotary pump	4 L		6040-0798
Oil, rotary pump	1 L		6040-0834
Oil mist filter kit	For rotary pump, E2M18		3162-1056
Oil mist filter element	For rotary pump, E2M18		1535-4970
O-ring for vacuum chamber, Viton			5042-0901
Odor element for oil mist filter	For E2M18	5/pk	5063-9153
O-rings for vent valve, Viton		2/pk	G1833-65332

Miscellaneous Components

Description	Specs	Part No.
Filter for cooling water	One filter	G1820-65018
Plastic tray for the sample introduction area		G1833-65412
Cooling water hose	10 m	G1833-65429